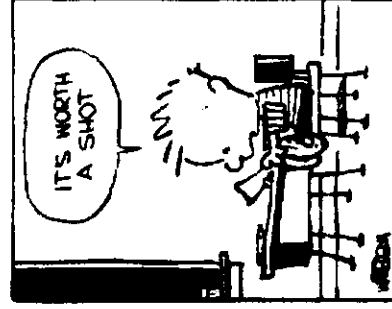
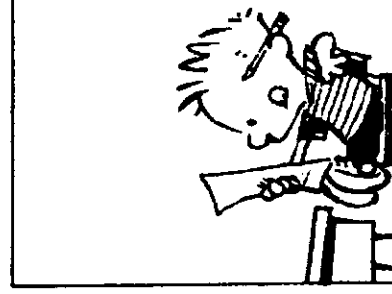
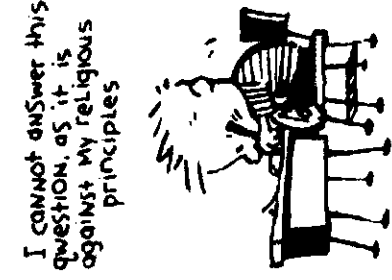
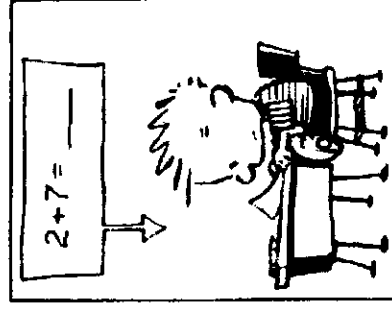
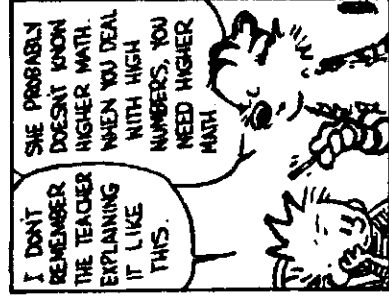
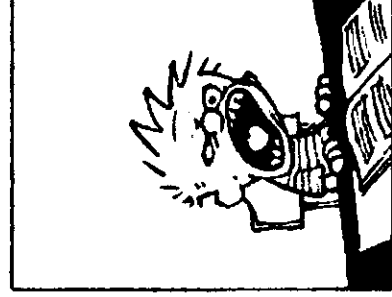
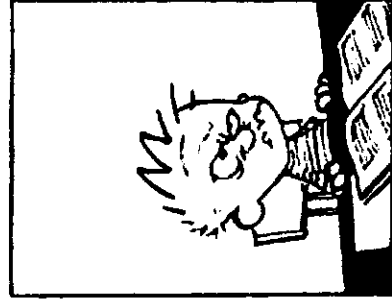
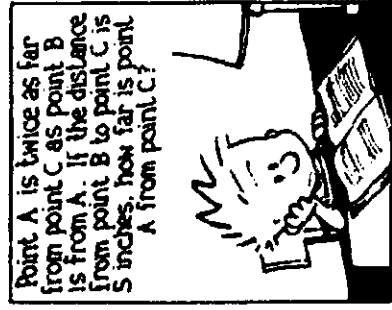
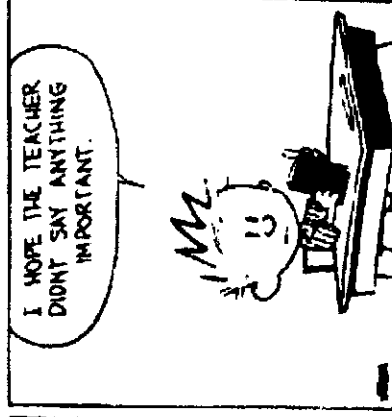
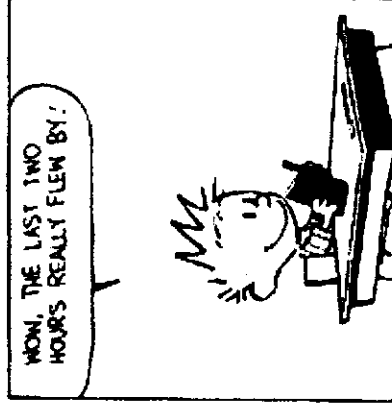
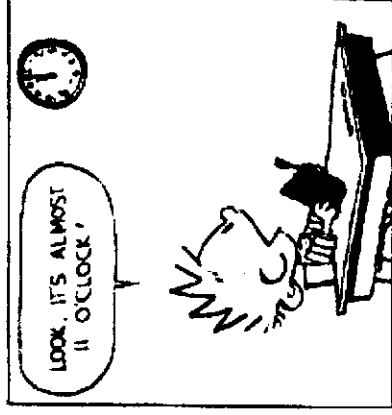


# Equations and Inequalities (Review)

## Unit 2

Section	Topic	Assignment	Packet Page Number
1.6	Two-step Equations	Kuta WS 1-12 p49 #12-20	1
1.6	Multi-step Equations	Kuta WS 1-20 P49 #21-40	2
1.7	Graphing Basic Inequalities	Kuta WS 1-24 P 58 #10-19	3-4
1.7	Multi-Step Inequalities	Kuta WS 1-24 P58 #20-49	5-6
1.7	Compound Inequalities	Kuta WS 1-16 P59 #52-71	7-8
1.8	Absolute Value Equations	Kuta WS 1-18 p68 #25-39	9
1.8	Absolute Value Inequalities	Kuta WS 1-26 Practice 6.5 P68 #40-57	10, 11 and 12
	Solving and Writing Linear Equations	Keystone Algebra 2WS, both 1-16	13-16
		Study Island Practice 5-25  P68-69 #62-65	17-22
		Review	23-25
		<b>Test</b>	



## Two-Step Equations

Solve each equation.

1)  $6 = \frac{a}{4} + 2$

2)  $-6 + \frac{x}{4} = -5$

3)  $9x - 7 = -7$

4)  $0 = 4 + \frac{n}{5}$

5)  $-4 = \frac{r}{20} - 5$

6)  $-1 = \frac{5+x}{6}$

7)  $\frac{v+9}{3} = 8$

8)  $2(n+5) = -2$

9)  $-9x + 1 = -80$

10)  $-6 = \frac{n}{2} - 10$

11)  $-2 = 2 + \frac{v}{4}$

12)  $144 = -12(x+5)$

## Multi-Step Equations

Solve each equation.

1)  $-20 = -4x - 6x$

2)  $6 = 1 - 2n + 5$

3)  $8x - 2 = -9 + 7x$

4)  $a + 5 = -5a + 5$

5)  $4m - 4 = 4m$

6)  $p - 1 = 5p + 3p - 8$

7)  $5p - 14 = 8p + 4$

8)  $p - 4 = -9 + p$

9)  $-8 = -(x + 4)$

10)  $12 = -4(-6x - 3)$

11)  $14 = -(p - 8)$

12)  $-(7 - 4x) = 9$

13)  $-18 - 6k = 6(1 + 3k)$

14)  $5n + 34 = -2(1 - 7n)$

15)  $2(4x - 3) - 8 = 4 + 2x$

16)  $3n - 5 = -8(6 + 5n)$

17)  $-(1 + 7x) - 6(-7 - x) = 36$

18)  $-3(4x + 3) + 4(6x + 1) = 43$

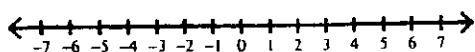
19)  $24a - 22 = -4(1 - 6a)$

20)  $-5(1 - 5x) + 5(-8x - 2) = -4x - 8x$

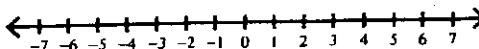
## Graphing Inequalities

Draw a graph for each inequality.

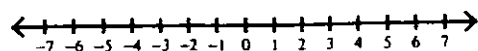
1)  $x \leq 6$



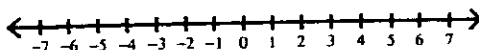
2)  $k \leq -2$



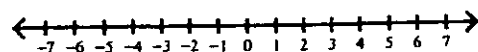
3)  $a \leq 4$



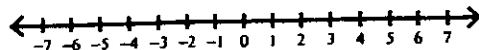
4)  $x \geq 3$



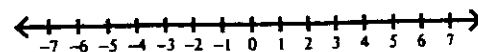
5)  $m < 2$



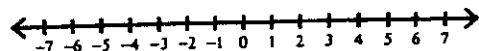
6)  $p \geq 5$



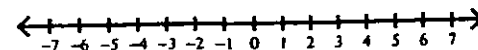
7)  $-2 > r$



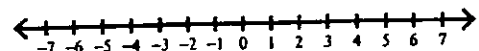
8)  $b > -6$



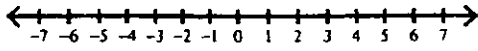
9)  $1 \leq x$



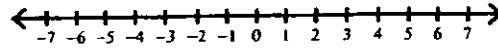
10)  $m > 1$



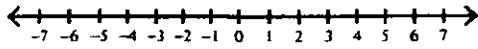
11)  $6 \leq x$



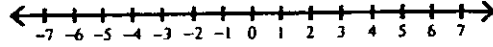
12)  $1 \geq b$



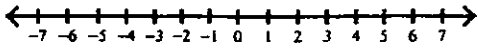
13)  $-4 < -p$



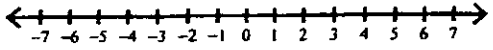
14)  $b > 2$



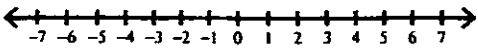
15)  $-4 > -n$



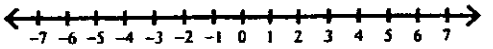
16)  $-m \leq 2$



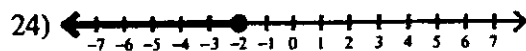
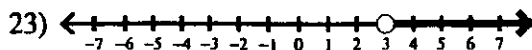
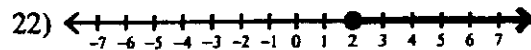
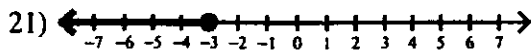
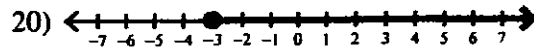
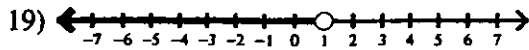
17)  $r < 6$



18)  $-n > 0$



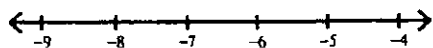
**Write an inequality for each graph.**



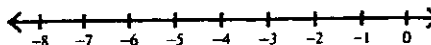
## Multi-Step Inequalities

Solve each inequality and graph its solution.

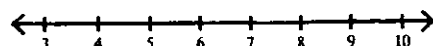
1)  $-3x + 2x \leq 6$



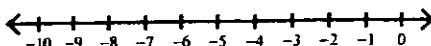
2)  $3 - 6n - 4 < 17$



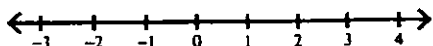
3)  $n - 3 + 4 > 7$



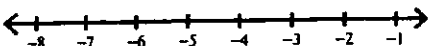
4)  $0 < n - 1 + 6$



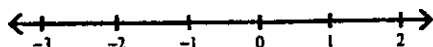
5)  $-3x - 2x < 5$



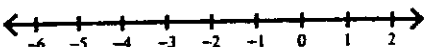
6)  $-(2 + 2m) - 2 > 6$



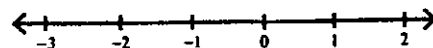
7)  $-9 \geq -8(1 + 6v) - 1$



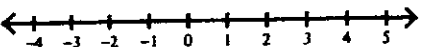
8)  $8(1 - 4x) > 40$



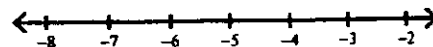
9)  $4(8 - 2b) - 2b \leq 32$



10)  $5x - 7(x + 1) > -9$



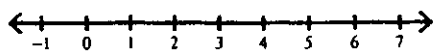
11)  $-p + 6p \leq 4 + 6p$



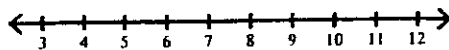
12)  $5 + 4x \geq x + 8$



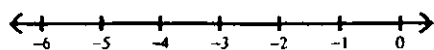
$$13) 4k - 4 - 3k > 13 - 7k - 1 + 8$$



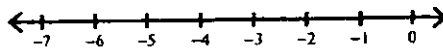
$$14) r - 7 > 9 - r$$



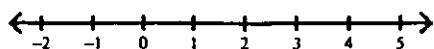
$$15) 6 + 2x \leq 12 + 8x - 3x$$



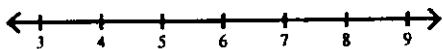
$$16) -30 + 5x > 4(6 + 8x)$$



$$17) -7v - 8 \leq 6(1 - 2v) + 1$$



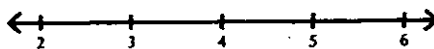
$$18) 38 + 5x > 7(x + 4)$$



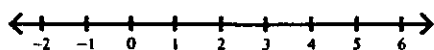
$$19) 7 - 7(x - 7) > -4 + 5x$$



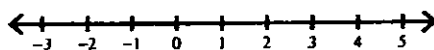
$$20) -3(2v - 5) < -13 + v$$



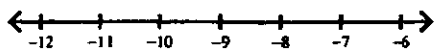
$$21) -24 \leq 6(5b - 2) - 8(8b - 7)$$



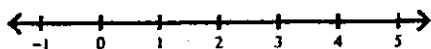
$$22) 7(1 - 5n) - (n + 3) \geq 4$$



$$23) 5n + 7(-6 - n) > 4(n + 3)$$



$$24) x - 8 + 3x + 2 < -6(8x - 7) + 4(8x - 2)$$





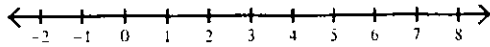
# Solving Compound Inequalities Revisited

© 2012 Kuta Software LLC. All rights reserved.

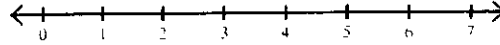
Date \_\_\_\_\_ Period \_\_\_\_\_

Solve each compound inequality and graph its solution.

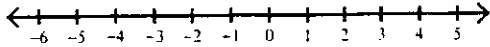
1)  $0 < \frac{n}{6} \leq 1$



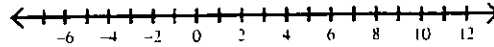
2)  $18 < 6v < 24$



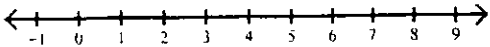
3)  $-40 \leq 8a \leq 32$



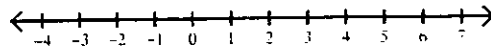
4)  $-8 \leq x - 3 \leq 6$



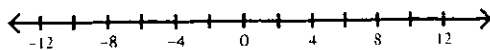
5)  $-32 \leq -4x \leq 0$



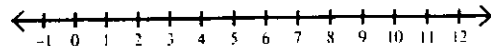
6)  $1 \leq n + 2 \leq 8$



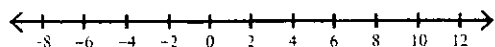
7)  $-2 \leq \frac{k}{5} < 2$



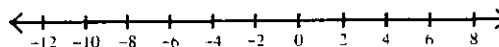
8)  $0 \leq 9r \leq 81$



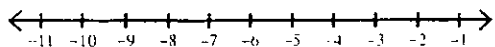
9)  $-34 < 8 + 6m \leq 68$



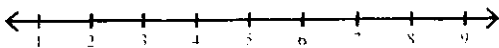
10)  $-37 \leq -1 - 6n \leq 59$



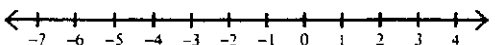
11)  $-48 < 5r - 8 < -18$



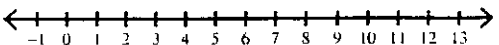
12)  $-30 < 10 - 5x < -5$



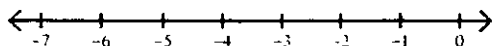
13)  $-3 \leq 1 - 4b < 17$



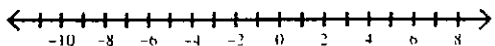
14)  $20 \leq 8n + 4 \leq 84$



15)  $-13 < -1 + 2n < -7$



16)  $-26 \leq 6 + 4x < 34$



## Absolute Value Equations

Date \_\_\_\_\_ Period \_\_\_\_\_

Solve each equation.

1)  $|6m| = 42$

2)  $|-6x| = 30$

3)  $|k - 10| = 3$

4)  $\left|\frac{x}{7}\right| = 3$

5)  $|7 + p| = 7$

6)  $|-3p| = 15$

7)  $7|n| = 56$

8)  $\frac{|m|}{5} = 3$

9)  $-3|p| = -12$

10)  $|m| + 2 = 11$

11)  $|n| + 1 = 2$

12)  $\frac{|x|}{7} = 5$

13)  $\frac{|a - 5|}{8} = 5$

14)  $4|n + 8| = 56$

15)  $|7m| + 3 = 73$

16)  $\left|\frac{x}{7}\right| - 8 = -7$

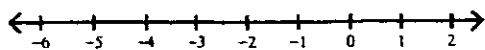
17)  $\frac{|-9 + v|}{8} = 3$

18)  $-10|v + 2| = -70$

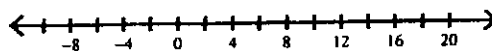
## Absolute Value Inequalities

Solve each inequality and graph its solution.

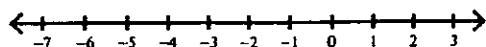
1)  $|n + 2| < 2$



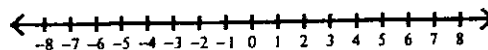
2)  $|-6 + n| > 12$



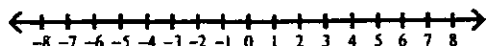
3)  $|x + 1| > 1$



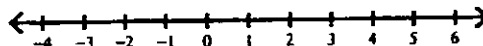
4)  $|-6v| \geq 30$



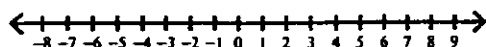
5)  $|x| + 2 \leq 7$



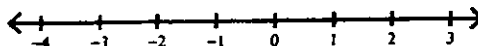
6)  $-4|m| < -4$



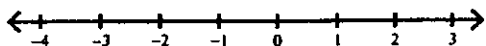
7)  $|p| - 5 \geq 0$



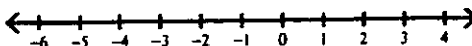
8)  $|x| + 2 \leq 4$



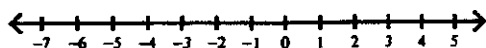
9)  $1 + |v + 1| < 2$



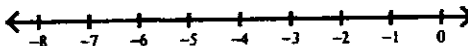
10)  $|-3x| - 6 > -3$



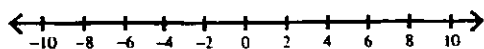
11)  $\left|\frac{m}{2}\right| + 5 \geq 6$



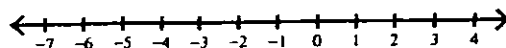
12)  $3|x + 5| \leq 6$



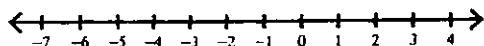
$$13) |8 + 9x| > 53$$



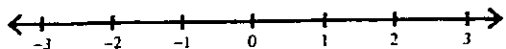
$$14) |4n - 10| \leq -2$$



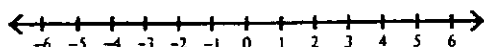
$$15) |7 + 8x| > -89$$



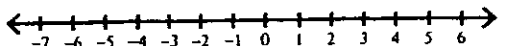
$$16) |-8v + 7| < 9$$



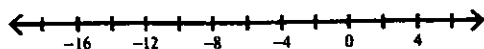
$$17) 3 + 2|9 + n| \leq -1$$



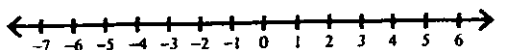
$$18) 8|-2v| - 2 > 30$$



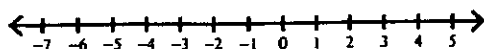
$$19) 10|n + 6| - 7 > 73$$



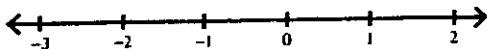
$$20) -1 + 4|6r| > -97$$



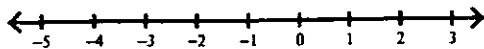
$$21) 5|5n + 7| + 3 > 18$$



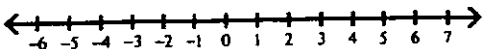
$$22) 9|-6a - 6| - 9 < 45$$



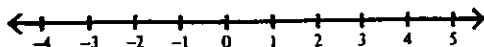
$$23) 8|8 + 6x| + 8 \leq 40$$



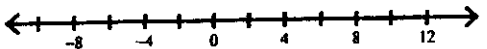
$$24) -4|-3 + 7v| + 9 \leq -59$$

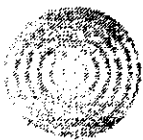


$$25) 4 - 4|8x - 4| \geq -76$$



$$26) -3|6 - 3k| - 10 \leq -82$$





## Practice

### 6.5 Absolute-Value Equations and Inequalities

Find the values of  $x$  that solve each absolute-value equation.  
Check your answers.

- |                         |                              |
|-------------------------|------------------------------|
| 1. $ x + 2  = 5$ _____  | 2. $ x + 6  = 7$ _____       |
| 3. $ x - 7  = 4$ _____  | 4. $ x - 3  = 5$ _____       |
| 5. $ 4x - 2  = 6$ _____ | 6. $ 3x + 5  = 11$ _____     |
| 7. $ -4 + x  = 7$ _____ | 8. $ x - 2.75  = 0.05$ _____ |

Find the values of  $x$  that solve each absolute-value inequality.  
Graph each answer on the number line provided. Check your answers.

- |                                |  |
|--------------------------------|--|
| 9. $ x + 2  > 7$<br>_____      |  |
| 10. $ x + 1  \leq 8$<br>_____  |  |
| 11. $ -2 - x  \geq 4$<br>_____ |  |
| 12. $ x + 1  \geq 4$<br>_____  |  |
| 13. $ x - 3  > 2$<br>_____     |  |
| 14. $ 4 - x  \geq 5$<br>_____  |  |
| 15. $ x + 2  > 2$<br>_____     |  |
| 16. $ x - 5  \leq 1$<br>_____  |  |
| 17. $ x + 2  < 2$<br>_____     |  |

## Solving and Writing Linear Equations Practice

Date \_\_\_\_\_ Period \_\_\_\_\_

© 2012 Kuta Software LLC All rights reserved.

**Solve each equation.**

1)  $n + 2 = 6$

2)  $b - 14 = -13$

3)  $11 = \frac{n}{9}$

4)  $-96 = -6x$

**Create a 1 step equation that can be used to solve the problem. Circle your equation, then solve it. No credit will be given for answers without an equation.**

- 5) After paying \$4 for a pizza, Anjali has \$32.  
With how much money did she start?

- 6) Mark ran 7 miles more than Cody last week.  
Mark ran 20 miles. How many miles did Cody run?

- 7) Heather ran 24 miles more than Natalie last week. Heather ran 41 miles. How many miles did Natalie run?

- 8) In six years Daniel will be 57 years old. How old is he now?

**Solve each equation.**

9)  $2m + 9 = 7$

10)  $-14 = -10 + \frac{v}{4}$

11)  $\frac{n}{5} - 10 = -8$

12)  $-160 = -8r - 8$

**Create a 2 step equation that can be used to solve the problem. Circle your equation, then solve it. No credit will be given for answers without an equation.**

13) A wise man once said, "300 reduced by twice my age is 112." What is his age?

14) Mark spent half of his weekly allowance playing mini-golf. To earn more money his parents let him mow the lawn for \$10. What is his weekly allowance if he ended with \$18?

15) Castel had some paper with which to make note cards. On his way to his room he found four more pieces to use. In his room he cut each piece of paper in half. When he was done he had 22 half-pieces of paper. With how many sheets of paper did he start?

16) Kali won 59 lollipops playing basketball at her school's game night. Later, she gave four to each of her friends. She only has 7 remaining. How many friends does she have?



## Solving and Writing Linear Equations Homework

© 2012 Kuta Software LLC. All rights reserved.

**Solve each equation.**

1)  $22 = 9 + m$

2)  $63 = 7p$

3)  $14 = \frac{n}{15}$

4)  $x + 13 = -5$

**Create a 1 step equation that can be used to solve the problem. Circle your equation, then solve it. No credit will be given for answers without an equation.**

5) Kathryn and her best friend found some money in an envelope. They split the money evenly, each getting \$8. How much money did they find?

6) Diapers cost \$6 / package. How many packages did Ashley buy if she spent \$18?

7) Maria is cooking a cake. The recipe calls for 3 cups of water. She has already put in 2 cups. How many more cups does she need to put in?

8) Last week Paul ran 41 miles more than Joe. Paul ran 47 miles. How many miles did Joe run?

**Solve each equation.**

9)  $-127 = -7 - 6x$

10)  $-14 = -10 + 4v$

11)  $4x + 10 = 42$

12)  $-7a + 6 = 97$

**Create a 2 step equation that can be used to solve the problem. Circle your equation, then solve it. No credit will be given for answers without an equation.**

13) Jasmine won 62 lollipops playing horseshoes at her school's game night. Later, she gave two to each of her friends. She only has 10 remaining. How many friends does she have?

14) James had some candy to give to his three children. He first took two pieces for himself and then evenly divided the rest among his children. Each child received two pieces. With how many pieces did he start?

15) For a field trip 5 students rode in cars and the rest filled three buses. How many students were in each bus if 74 students were on the trip?

16) Jaidee rented a bike from Stefan's Bikes. It cost \$16 plus \$8 per hour. If Jaidee paid \$40, then she rented the bike for how many hours?

5. Fancy Flowers charges \$20 for a standard seasonal arrangement in a glass vase. Additional seasonal flowers cost \$1.35 per flower. If a customer paid \$47.00 for the standard arrangement plus extra flowers, how many extra flowers did they order?

Write your response here:  
(show your work)



Generation Date: 08/04/2013

Generated By: Kayla Lower

Printable Worksheet

6. The Bridgeport water department has a monthly service charge of \$14.20 and a volume charge of \$1.32 for every 100 cubic feet of water. Which of the following equations can be used to determine the Morgan family's monthly water bill?

(Let  $x$  represent 100 cubic feet of water and  $y$  represent the monthly cost)

Write your response here:  
(show your work)

7. Larry's Lawns spends their workday mowing lawns, raking, and bagging leaves. They work an average of twelve hours per day. The mowing and raking typically takes eight hours and an average of forty bags of leaves are filled. Assuming the bags are filled at a constant rate, what is the average time it takes to fill one bag of leaves?

Write your response here:  
(show your work)

Solve for  $x$ .

8.  $8(2x - 12) = 88x$

Write your response here:  
(show your work)

9. The cost of a long-distance telephone call is given by the function

$$C(m) = 0.05m + 0.85,$$

where  $m$  is the length of the call in minutes. Determine how long a phone call can be made for \$3.35.

Write your response here:  
(show your work)

---

Solve for  $x$ .

10.  $13x + 7 = 18x - 7$

Write your response here:  
(show your work)

11. LeAnne leaves town traveling at an average speed of 52 mph. After 4 hours, Bart leaves town traveling in the same direction at an average speed of 77 mph. Which of the following equations could be used to represent the distance between LeAnne and Bart after  $x$  hours?

(Let  $x$  represent the time in hours that Bart has been traveling and  $y$  represent the distance between LeAnne and Bart.)

Write your response here:  
(show your work)

---

**12.** The senior class officers have figured out that the prom will cost \$4,000 for location rental and decorations and another \$51 per person for food.

Write an equation in general form that expresses the cost of the prom in dollars,  $y$ , as a function of the number of people who attend,  $x$ .

Write your response here:  
(show your work)

---

**13.** A company manufactures and sells mini-recorders. A survey of office supply stores indicated that the demand for 2 hundred recorders would cause them all to be sold if they cost \$61 each, and the demand for 7 hundred recorders would cause them all to be sold if they cost \$31 each. If a linear relationship between demand and price exists, which of the following equations models the demand-price relationship?

(Let  $x$  represent the demand in hundreds and  $y$  represent the price per mini-recorder.)

Write your response here:  
(show your work)

---

**14.** Carson is a salesman at an insurance company. He receives a monthly salary of \$1,264.00 and a \$200.00 commission on each policy he sells. If Carson receives his commission check at the end of the month along with his salary check, which of the following equations can be used to determine his total pay for the month.

(Let  $x$  represent the number of policies sold and  $y$  represent the total amount of pay for the month.)

Write your response here:  
(show your work)

Solve for  $p$ .

15.

$$\frac{2p - 27}{2} = 2$$

Write your response here:  
(show your work)

---

16. Forrest Lumber uses the function

$$S(t) = -90t + 540$$

to determine the salvage value,  $S(t)$ , in dollars, of a table saw  $t$  years after its purchase. How long will it take the saw to depreciate completely?

Write your response here:  
(show your work)

---

17. Zach and his friends had a movie marathon on Saturday. Each movie they watched was two hours long. Five hours into their movie marathon, Zach and his friends had watched  $2\frac{1}{2}$  movies.

Write an equation in general form that expresses the number of movies they watched,  $y$ , as a function of the number of hours they spent watching movies,  $x$ .

Write your response here:  
(show your work)

---

18. Mike discovered that the pool in his backyard is leaking slowly. The pool holds 17,108 gallons of water, and is leaking at a rate of 12 gallons per day. If Mike does not replace the water that has leaked from the pool, how many gallons of water will remain in the pool after 65 days?

Write your response here:  
(show your work)

---

**19.** A company manufactures and sells video games. A survey of video game stores indicated that at a price of \$80 each, the demand would be 300 games, and at a price of \$40 each, the demand would be 1,100 games. If a linear relationship between price and demand exists, which of the following equations models the price-demand relationship?

(Let  $x$  represent the price per video game and  $y$  represent the demand.)

Write your response here:  
(show your work)

---

**20.** Betsy's high school is putting on a production of a play as a fundraiser for the school's music programs. A local bank has agreed to allow the school to use a line of credit from which they can withdraw money to pay for the play. Then, any deposits they make at the bank will be applied to the negative balance of the credit account.

The play cost \$3,100.00 to produce, and they intend to sell tickets for \$7 apiece. After the play, Betsy will take the ticket proceeds and deposit them with the bank. If 1,109 people attend the play's opening night, what will the balance of the bank account be?

Write your response here:  
(show your work)

---

**21.** Betty started a health and fitness program. So far, she has lost a total of 6 pounds. She is losing an average of one-half of a pound per week. If she maintains her average weekly weight loss, what will be her total weight loss in 6 weeks?

Write your response here:  
(show your work)

22. Marcus works as a salesman at a car dealership. He is paid a base salary of \$1,175.26 each month, and he receives a commission of \$120.53 for each vehicle he sells. If last month Marcus earned \$6,478.58, how many cars did he sell last month?

Write your response here:  
(show your work)

---

23. Sheila's job has a base monthly salary of \$1,200. For every sale she makes, she earns \$40. If Sheila's goal is to earn \$4,000 this month, how many sales does she need to make?

Write your response here:  
(show your work)

---

Solve for  $m$ .

24.  $9m = -16 + 5m$

Write your response here:  
(show your work)

---

25. Cassidy is going to the county fair with her friends but can only stay at the fair for 5 hours. The fair offers two different pricing structures. Cassidy can purchase an all-day pass with unlimited rides for \$30.00 or she can pay an admission fee of \$6.00 and pay \$4.00 for each ride. If Cassidy rides 14 rides, how much does she save by buying the all-day pass?

Write your response here:  
(show your work)



Unit 2: Equations and Inequalities Review

page 1 of 3

Solve the equation.

- \_\_\_\_\_ 1.  $10x + 2 = 72$   
a. 74                      b. 4                      c. 7                      d. 70
- \_\_\_\_\_ 2.  $\frac{2}{16}y - 65 = 0$   
a. 520                      b. 2080                      c. -520                      d. -2080
- \_\_\_\_\_ 3. The perimeter of a rectangular garden is 860 ft. The two short sides of the garden are each 30 ft long. You are asked to find the length of the other sides. Which equation models this situation?  
a.  $30 + x = 860$                       c.  $30(x - 2) = 860$   
b.  $2(30) + 2x = 860$                       d.  $30 + 2x = 860$

Solve the equation.

- \_\_\_\_\_ 4.  $-3x + 25 + x + 21 = 2$   
a. 22                      b. -3                      c. -22                      d. 3

5.  $\frac{9x}{3} + 11x = 28$

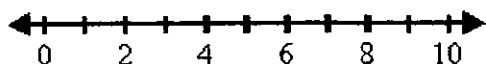
6.  $\frac{1}{4}(y + 3) = 7$

- \_\_\_\_\_ 7.  $8x - 9 = x + 9$   
a.  $\frac{18}{7}$                       b.  $-\frac{18}{7}$                       c.  $\frac{7}{18}$                       d.  $\frac{1}{8}$

8.  $3 - 4z = -5 + 8z$

Solve and graph.

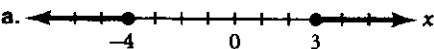
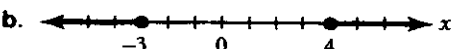
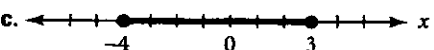
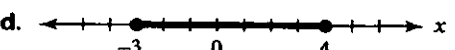
9.  $-12y < -60$





## Chapter Assessment

### Chapter 1, Form A, page 2

- \_\_\_\_\_ 10. Find the solution to the equation  $2x + 3(x - 7) = -2(x - 21)$ .  
 a.  $x = 2$       b.  $x = 9$       c.  $x = 5$       d.  $x = -3$
- \_\_\_\_\_ 11. Find the solution to the equation  $|5x - 10| = 20$ .  
 a.  $x = -6$       b.  $x = -2$       c.  $x = 6$  or  $x = -2$       d.  $x = -6$  or  $x = 2$
- \_\_\_\_\_ 12. Find the solution to the equation  $\frac{6x + 5}{3} = \frac{5 - 2x}{4}$ .  
 a.  $x = -\frac{1}{3}$       b.  $x = \frac{1}{3}$       c.  $x = -\frac{1}{6}$       d.  $x = \frac{1}{6}$
- \_\_\_\_\_ 13. Find the solution to the inequality  $\frac{6 - 2x}{3} > -4$ .  
 a.  $x < -15$       b.  $x > -9$       c.  $x < 9$       d.  $x > 15$
- \_\_\_\_\_ 14. Find the solution to the inequality  $3x - 15 < 9 + 7x$ .  
 a.  $x > -6$       b.  $x < -6$       c.  $x > 6$       d.  $x < 6$
- \_\_\_\_\_ 15. Which of the following is the graph of the solution set of the compound inequality  $3x + 4 \leq 13$  and  $6 + 2x \geq -2$ ?  
 a.       b.   
 c.       d. 
- \_\_\_\_\_ 16. Find the solution to the inequality  $|4x - 6| > 14$ .  
 a.  $x > 5$       b.  $x < -2$       c.  $x > 5$  and  $x < -2$       d.  $x > 5$  or  $x < -2$

## Chapter Assessment

Chapter 1, Form B, page 2

Unit 2 Review p 3 of 3

Solve each equation.

17.  $|8x - 12| - 4 = 14$

18.  $|2x - 6| = 4 - 3x$

Solve each inequality.

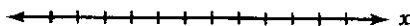
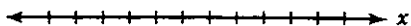
19.  $8(5 - 3x) \leq -24$

20.  $\frac{5}{3}x + 15 > \frac{3}{4}x - 18$

Solve each inequality. Graph your solution on the number line.

21.  $|x + 5| \leq 2$

22.  $|4x - 5| > 7$



- 23 Sam is a salesperson at a department store. He earns a weekly salary and a commission on his weekly sales. In one week, Sam's sales were \$3500, and his income for the week was \$475. The next week his sales were \$5000, and his income for the week was \$625.

- Write a linear equation in slope-intercept form for Sam's weekly income,  $y$ , in terms of his weekly sales,  $x$ .
- What were Sam's sales in a week in which his income was \$325?